



Confined Spaces Exercise Solutions

Introduction to Circuit Training

Objectives

- Factors that limit space
- Benefits of Circuit Training
- Circuit Training Defined
- Circuit Training Variables
- Warm-up
- Cool down
- Final Thoughts

Limiting Factors

- Area per participant
 - Deck surface
 - Total space/participant
- Overhead clearance
- Objects in space
- Ship movement

Circuit Training

A Solution for Confined Spaces

- Benefits
 - Easily adapted to varying fitness levels
 - Does not require a lot, if any equipment
 - Easily adapted to varying space limitations
 - Easily implemented with small or large groups
 - Easily changed to emphasize different fitness and skill components
 - FUN!

Circuit Training

- Defined:
 - A systematic physical conditioning format that incorporates multiple exercise stations. Stations are navigated by participants sequentially and continuously. Exercise stations can address any or all of the following:
 - Health related fitness components- Cardio, flexibility and strength
 - Skill components- balance, speed, agility

Circuit Training Variables

- Equipment
- Number of stations
- Time
- Exercises
- Order of exercises
- Exercise modifications

Equipment

- Body weight
- Partners
- Weights-dumbbells, body bars, medicine balls
- Tubing and bands
- Stability balls, BOSU
- Agility ladder
- Creative tools- ladder, sandbags or other water/sand filled containers, towels, box

Number of stations

- Usually 5-12 stations
- Space dependent if not performing all exercises in place
- Dependent on time allowed for session

Time

- Total time of session- the sum of the following:
 - Warm-up-5-10 minutes
 - Number of stations multiplied by station time.
 - Transition time (5-10 sec) multiplied by number of transitions
 - Finally, may conduct an entire circuit more than once but should allow for a mid point break for water and recovery (typically 2-5 min).
- Time per station
 - Typically 30 sec-2 min dependent on the fitness level of participants and the exercises being performed.
 - Start conservatively and progress as participants are able to complete each station without loss of form.

Exercises

- Types

- Strength/strength endurance- Push ups, squats, curl ups, dips, lunge
- Cardiovascular- Jog, jump rope, butt kickers, speed bag
- Flexibility-seated hamstring stretch, runners calf stretch
- Balance- single leg balance, single leg short squat, lunge or squat on bosu
- Agility-four square hop, line hop, agility ladder drills
- Speed-shuttle run
- Combination- single leg SL dead lift without weight (strength, flex, balance)

Exercise Choice and Order of Exercises

- Guidelines for exercise station activities:
 - Balance-equal push:pull, equal anterior:posterior muscle groups
 - Emphasis of circuit e.g., strength, cardio, skill components, PFA components, weight control, combination
 - Alternate emphasis of **each** station to allow for recovery
 - Cardio followed by strength (jog/push up)
 - Push followed by pull (push up/row)
 - Lower body followed by upper body (squat/push up)

Exercise Modifications

- Should be offered when possible
 - Accommodates varying level of fitness within a group
 - Accommodates fatigue as session progresses

Exercise Modifications

Activity	Beginner Level	Intermediate Level	Advanced Level
Push-Up	Push-Up on Knees	Regular Push-Up	3-Count Down Push-Up
Squats	$\frac{1}{4}$ Squats	3-Count Down Squat	Squat w/ Body Bar or Tubing
Curl-Ups	Basic Curl-up until fatigue then proceed to crunch	Basic Curl-up	Reverse Curl-Up or Curl-Up with Medicine Ball
Tricep Super Set (10 push-up followed by 10 military presses). Repeat cycle for entire circuit	Push-Up performed on knees with narrow hand stance; Military Press w/ no resistance	Regular Push-Up with narrow hand stance; Military Press w/ no resistance	3-Count Down Push-Up w/ narrow hand stance; Military Press w/ no resistance or w/ tubing.
Lunge	$\frac{1}{4}$ Lunge	Stationary Lunge (with or without body bar)	Reverse Lunge (may use body bar)
Core Strength: Plank: 20 seconds R Side Plank: 20 seconds R Side Plank: 20 seconds	Exercises Performed on elbows	Exercises Performed with arms straight (slight bend in elbow)	Incorporate Push-Up in exercise. Ex: Push-up> R Side Plank> Push-up> L Side Plank> Push-up

Warm-up

- Necessary to “ready” the body for exercise
- Should be dynamic
 - Avoid static stretching as a warm-up
 - Can be performed “in place”
 - March in place
 - Butt kickers
 - Jog in place
 - Jump rope/easy rope
 - Aerobox

Cool Down

- Lower intensity activity at the end of an exercise session to allow heart rate to return closer to normal prior to ending activity completely.
 - Usually 5-10 minutes
 - May end cool down with static stretches such as standing quad stretch, Runners calf stretch, standing quad stretch.

Final Thoughts

- **Excessive Ship Movement**
 - Be smart- you are the experts
 - Know when to “call it”
 - Use more “fixed” objects
 - Avoid highly unstable equipment and exercises (stability ball)
 - Reduce station transitions-use “in place” activities
- **Progression**
 - Offer small incremental changes at least every 2 weeks
 - Keeps the body guessing and adapting
 - Provides Variety and maintains interest
- **Motivational Tools**
 - Music
 - Chanting/counting out loud
 - Variety
 - Fun stations
 - Creativity

Questions?

